JPRS 74067

23 August 1979

Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 6

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50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. JPRS 74067	2.	3. Recipient's Accession No.
4. Title and Subtitle WORLDWIDE REPORT: NUCLEAR DEVELOPMENT AND PROLIFERATION, No. 6			5. Report Date 23 August 1979 6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Organization Name and Address Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address As above			13. Type of Report & Period Covered 14.
15. Supplementary Notes			

16. Abstract (Limit: 200 words)

This serial report contains worldwide press and radio coverage of nuclear research programs; technical indicators of nuclear capabilities; production capability; construction and purchase of nuclear facilities; status of uranium and thorium supplies; level of technology in high explosives and advanced munitions; government and nongovernment attitudes on nuclear-related topics; international agreements for nuclear cooperation; transfer of technology; personalities, organizations, equipment and facilities.

17. Document Analysis a. Descriptors

WORLDWIDE
Nuclear Proliferation
Nuclear Development
Uranium
Thorium
Technology

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group 18

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
Unlimited Availability Sold by NTIS Springfield, Virginia 22161	UNCLASSIFIED	30
	20. Security Class (This Page) UNCLASSIFIED	22. Price

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SUB-SAHARAN AFRICA

WEST EUROPE

SOUTH AFRICANS INTERESTED IN AUSTRALIAN URANIUM

Canberra THE AUSTRALIAN in English 22 Jun 79 p 9

[From Financial Editor Bryan Frith on tour in South Africa]

[Text] THE Anglo American Corporation was interested in investing in Australian uranium and base metal developments, an executive director, Mr Gordon Waddell indicated yesterday.

He said Anglo would be "favorably inclined" to invest in the Western Mining Corporation's Roxby Downs copper-uranium deposit in South Australia if that appealed to the Australian company.

Mr Waddell said he and Anglo's technical director had expressed interest in Roxby Downs to WMC managing director, Mr Hugh Morgan about two years ago.

They asked that Mr Morgan bear Anglo in mind if considering outside parties. There had been no move by Anglo in the formal sense of approaching the WMC board.

"I think they are aware of our interest; I think Anglo has considerable technical expertise which could be of use," he said.

"Perhaps there would be a role for Anglo other than purely investment, perhaps through technical expertise: obviously WMC would be in control and would want to manage it.

"I understand there are a great number of others who have expressed interest in Roxby Downs," Mr Waddell said.

"I suspect, rightly or wrongly, that what will militate against against us is that we are a South African group."

Mr Waddell cited WMC's Yeelirrie uranium deposit in Western Australia and the Banambra base metal discovery in north eastern Victoria as two more of the type of finds in which Anglo could be interested.

He said the Anglo group would be interested in participating in development of Australian uranium, although he realised this was politically sensitive.

Anglo American was less enthusiastic about Australian coal.

Mr Waddell said it was the group's view that, because of the huge coal purchasing program by major oil companies, it would take some time for the economics to catch up with the prices.

Another executive director of Anglo, and head of the gold division Mr Dennis Ehteridge said Anglo would like a stake in the Australian uranium industry if it could find a way in, but it was not something that had been actively discussed of late.

Mr Waddell said it had always been Anglo American's aim in Australia to find a viable mine which it could confidently float to the Australian public.

Anglo envisaged a holding of 30 to 40 per cent – not a majority. Anglo had not tried to buy into companies, but would not be averse to a 10 to 15 per cent interest in a company.

CSO: 5100

WEST AUSTRALIA NAMES POSSIBLE NUCLEAR PLANT SITES

Details, Timetable Given

Perth THE WEST AUSTRALIAN in English 16 Jun 79 p 1

[By E. A. Barker]

[Text] The WA Government has named Breton Bay, 90km north of Perth, and Wilbinga, 70km north of Perth, as possible sites for a nuclear power station.

The Breton Bay site is on private land about 8km south of Ledge Point. The Wilbinga site is on crown land about 10km north of Two Rocks.

About $400,000 will be spent over the next two years on detailed engineering and geological studies to determine whether the sites are suitable for a nuclear reactor.

The long-awaited announcement on the sites brought immediate criticism from the WA Opposition and is certain to provoke renewed attacks by the antinuclear lobby and conservationists.

The Leader of the Opposition, Mr Davies, said that a State Labor government would not build a nuclear power station in WA because the risks were too high, the cost was too great and there was no need for one.

Target

The WA Government announced last year that it wanted to have a nuclear power station operating by 1995 to ensure long-term energy supplies.

The State Energy Commission has spent nearly a year investigating possible sites.

The commission and private consultants believe that the two named sites offer the best prospects.

Only about 100 hectares would be needed for a nuclear power station.

The Breton Bay area of about 7000 ha was gazetted yesterday as a power station site so that legal procedures for resumption could start if necessary.

The Government wants to acquire the land by negotiation if possible, but its initial approaches to the owners for a private sale have not succeeded. The land is thought to be owned by about 20 people.

The Wilbinga site occupies about 4000 ha in the Moore River industrial area. It is held by the Industrial Land Development Authority.

There is plenty of room for major industry to be established near a nuclear plant if this site is chosen.

The Premier, Sir Charles Court, said that the two sites had been selected using the most stringent guidelines anywhere in the world for such selection.

Studies

Sir Charles said that if detailed studies showed that either of the two sites was unsuitable, others were available.

He would not give the number or location of other possible sites.

He said that town-planning and environmental studies would be made after the engineering studies. The public would have ample opportunity to comment during the investigation.

There was no practical alternative to nuclear power on which firm plans could be based. The Government had to take action now to ensure that enough land was available for nuclear power and suitably sited.

Some of the problems that nuclear stations had encountered overseas stemmed directly from hasty decisions on sites and inadequate long-term planning, Sir Charles said.

The WA Government wanted to avoid such mistakes and allow plenty of time for the proper integration of nuclear power into WA.

Estimates

Government plans provide for a station of 600 to 800 megawatts. Advisers have estimated the capital cost of such a station at $600 to $800 million, but critics of the scheme have put the cost at up to $4000 million.

A provisional timetable provides for construction to start in 1985 to enable the plant to be operating by 1995.

The Federal Opposition spokesman on minerals and energy, Mr Paul Keating (NSW), warned in April that a Federal Labor government would never allow WA to go ahead with its plans for a nuclear reactor.

Sir Charles was asked yesterday if he thought that the plans would go into cold-storage if the Federal or WA governments went out of office.

He said: "I doubt it because I have a feeling that when the Labor Party gets the message that the world is facing a situation where nuclear power must be developed they will find a reason to change."

Local Opposition Reported

Perth THE WEST AUSTRALIAN in English 18 Jun 79 p 3

[Text] The State Government's announcement of two proposed sites for a nuclear power station has brought strong opposition from environmental groups and from people living hear the sites.

The sites are at Breton Bay, about 90km north of Perth and about 8km south of Ledge Point, and at Wilbinga, 70km north of Perth and 20km north of Two Rocks.

The 1000ha Breton Bay site is on private land but the Government gazetted the area on Friday as a power station site so that it could start resumption procedures if negotiations to buy it do not succeed.

The 4000ha Wilbinga site is on crown land in the Moore River industrial area and is held by the Industrial Land Development Authority.

The President of Gingin Shire Council, Cr B. W. Roe, said most of the people in the area affected were against the building of a nuclear power station close to a population centre.

The majority of the Shire Council was against having the proposed station so close to population centres.

Vote

The council had voted five to three against using the Breton Bay site about two months ago.

The council believed that there were many other areas in the State away from population centres where the station could be built.

A motion was likely to be put forward at the council meeting on Thursday seeking a referendum on the issue.

The president of the Seabird, Ledge Point and Lancelin Fishermen's Association, Mr Frank Douglas, said that fishermen in the area were "absolutely dead-set against building a nuclear power station at either site."

The area from Yanchep to Lancelin was a prolific breeding ground for crayfish.

Damage

The association opposed the power station as well as the proposed steel mill and Moore River deep-water port because of the damage they would do to the breeding grounds.

An executive member of the Conservation Council of WA, Mr Neil Bartholomaeus, said the Government's energy policy could bankrupt the State.

"To press ahead with plans for nuclear power and at the same time export the bulk of the North-West Shelf gas and commit most of the rest to the aluminium industry is economic nonsense," he said.

A spokesman for the Friends of the Earth, Dr Peter Brotherton, said: "The Premier is about to discover he has just precipitated the biggest environmental campaign that Australia has ever seen."

It was par for the course for Sir Charles to announce the sites for the proposed reactor on the eve of an overseas trip and then remove himself from any discussion and deliberation, he said.

In MELBOURNE, the State conference of the Victorian branch of the Labor Party condemned the decision to investigate the two areas as possible nuclear sites.

CSO: 5100

'HISTORIC' AWARD GIVEN WORKERS AT URANIUM SITES

Hardship Allowances Granted

Canberra THE AUSTRALIAN in English 27 Jun 79 p 19

[Text]

THE FIRST allowances for workers in the uranium industry were granted in a historic decision by the Arbitration Commission yesterday.

About 500 workers at the Nabarlek and Ranger uranium mining sites in the Northern Territory were given disability allowances of $1 an hour.

In addition, Commissioner Connell granted the men, members of the Miscellaneous Workers Union working at the Nabarlek site, an allowance of $20 a week.

He granted the payments after a number of claims had been made by the union.

These had included site, travel, and living away from home allowances.

The decision is expected to set a lead for claims involving allowances for workers in the industry.

GO-AHEAD

The men concerned in the decision are construction workers preparing the sites for mining.

The Federal Government gave the go-ahead for uranium mining at Nabarlek about three months ago, and Ranger last year.

In his decision Commissioner Connell said: "No persons are allowed to accompany or visit the men, no matter whether they are relatives or friends. And further, they are now not allowed to bring into the lease any alcohol, firearms, animals, birds, or outside fauna or flora — not even a pet budgerigar."

At the Ranger site, complaints ranged from the amount of dust in the area to the lack of chilled water.

The number of men employed at the site was expected to swell to a maximum of 1050.

Commissioner Connell said payments should be given considering the unique circumstances of the sites.

He said his decision would operate from May 1 and last until July 1 next year.

Living Conditions Described

Sydney THE SYDNEY MORNING HERALD in English 27 Jun 79 p 10

[Text]

No one is allowed to accompany or visit workers on uranium mine construction sites at Nabarlek and Ranger in the Northern Territory, whether they be dependants, relatives or friends.

They were not allowed to bring on to the sites any alcohol, firearms, animals, birds or outside flora, "not even the pet budgerigar," said Commissioner V. J. Connell who awarded the men a special allowance of $2 an hour in the Australian Conciliation Commission yesterday.

In addition, workers at Nabarlek were awarded a construction allowance of $20 a week.

Commissioner Connell said his decision would operate from May 1 last and remain in operation until July 31, 1980.

He said about 250 men were employed at Nabarlek and this was expected to rise to about 450.

The normal means of transporting people to and from the project was by light aircraft from Darwin.

Accommodation was provided by single barrack-type units.

Complaints made by the men included the complete isolation of the area; lack of normal social activities; extremely difficult communication problems in remaining in contact with wives, dependents and friends; and accommodation and lighting.

Complaints by the union delegates at Ranger included prevalence of dust and mud in wet periods, and lack of chilled water and ice-making facilities, Commissioner Connell said.

CSO: 5100

URANIUM OXIDE EXPORT SAFEGUARDS UNDER REVIEW

Sydney THE SYDNEY MORNING HERALD in English 27 Jun 79 p 8

[Text]

CANBERRA. — The future of Australia's safeguards policy on the export of uranium oxide has been under consideration for some time, a spokesman for the Minister for Overseas Trade, Mr Anthony, said yesterday.

He was questioned about a report in the Financial Review yesterday that the Federal Government had dropped a cornerstone of its nuclear safeguards' policy.

According to the report, Australia would now permit yellowcake (uranium oxide) to pass out of Australian ownership before being exported. International Atomic Energy Agency safeguards do not apply until yellowcake is converted to hexafluoride, a process which is not possible in Australia.

Until now the Government has required that Australia retain ownership of the yellowcake until conversion to ensure that its own safeguards apply until the IAEA controls take over.

"The position is that unless and until the Government announces any change, the policy will remain as it was," the spokesman said.

The Financial Review report said the Government saw two problems with the old policy of retaining Australian ownership of yellowcake:

The yellowcake could be vulnerable to seizure overseas to satisfy judgments against Australian uranium producers under US anti-trust laws.

Western Mining Company's proposal to sell uranium from its Yeelirrie project to its partner Esso would be hindered.

Any announcement of a decision to drop the Australian ownership requirement is expected to be accompanied by assurances that safeguards against diversion of the uranium to military purposes can be achieved by other means.

CSO: 5100

BRIEFS

UNDERGROUND MINING LIKELY--Sydney: Pancontinental Mining Ltd was almost certain to opt for underground mining of its huge Jabiluka uranium prospect in the Northern Territory, the chairman, Mr Tony Grey, indicated yesterday. The company's revised environmental study would be presented to the Government very soon, he said. Big changes had been made to the December 1977 draft. "I can say that we took the underground mining alternative very seriously," he said. Pancontinental, which has a 65 per cent interest in Jabiluka with the remainder held by Getty Oil Development Co Ltd of the United States, disclosed two months ago that underground mining was being considered. In evidence then, to an Arbitration Commission hearing relating to coverage of uranium workers in the Northern Territory, the company said that studies had shown that underground mining was both feasible and attractive. Less disturbance of land areas, elimination of waste dumps, a big reduction in the size of the tailings pond, and reductions in noise, dust and radon gas emanation were among advantages cited. [Text] [Perth THE WEST AUSTRALIAN in English 13 Jun 79 p 22]

CSO: 5100

BANGLADESH REVIVES NUCLEAR POWER PROJECT

Madras THE HINDU in English 5 Jul 79 p 5

[Text] Bangladesh has revived the 125 MW Rooppur nuclear power project in Pabna with French aid. It is also negotiating for Belgian assistance.

The project awaits clearance by the National Economic Council, the final decision maker on such matters. But the NEC approval is going to be only of a formal nature.

A proposal to set up a nuclear power reactor in Pabna had been included in Pakistan's five-year plan for launching in early 1970's. An agreement had in fact been signed, with Belgium for a 200 MW reactor, to be financed by a Belgian bank. Installation of the reactor was to begin in April, 1971, but the project was stalled as the liberation struggle brought about turmoil all over what was then East Pakistan.

The new proposal is to set up a plant with French assistance. France is also expected to supply on a permanent basis enriched uranium for the Rooppur project now estimated to cost Taka 4,500 million (approximately $300 million).

Soon after the violent political changes in the country in 1975, Dacca first considered reviving the nuclear power project to meet the chronic power shortage in the western districts of the country. A delegation visited a number of Western European countries the same year in search of a nuclear power reactor. It finally selected a 125 MW reactor in France.

The following year, the power division of the Planning Commission, the Water and Power Development Ministry and other ministries concerned, cleared the proposal for the Rooppur project with French assistance. In 1977 a French delegation visited Bangladesh.

The team decided to conduct an extensive survey in association with a Japanese consultancy firm regarding the basic issue of the installing a nuclear power reactor in Bangladesh. After working together for 18 months, a project report was submitted to the International Atomic Energy Commission for evaluation. Four IAEC experts studied the Rooppur project.

According to Bangladesh experts, the western districts would need 315 MW of electricity by 1985, a year before the Rooppur plant is expected to be commissioned. The current demand is only 100 MW. A substantial part of the new demand, thus, would be met by the Rooppur plant.

When the former Pakistan Government had negotiated with Belgium for a nuclear power project, 262 acres of land was acquired in Rooppur village, and a small township was built on a 30 acre-plot in Shahpur, a neighbouring village. Sophisticated equipment was purchased for a meteorological office set up there.

Although the project was revived with the assistance of France, Bangladesh also expects assistance from other sources. Some Arab countries are expected to help Dacca financially on the Rooppur project, and Belgium is again in the picture. Mr Marcel Gaube, Director General of the Belgian Atomic Energy Commission, visited Dacca this week and had discussions with the Bangladesh Minister of State for Science and Technology. Details of the talks were not available, but they were presumed to relate to nuclear cooperation between the two countries.--POT

CSO: 5100

BRIEFS

EXPLOSIVES PRODUCTION--India is one of the few countries in the world which have the knowhow to produce HMX--the most powerful explosive so far known to the world. HMX, or her majesty's explosive, is a British invention and India has succeeded in producing it through indigenously developed technology. HMX is used in warheads of sophisticated missiles and rockets and has far greater destructive powers than other types of explosives now in use. HMX is produced in a pilot plant located on the complex of the explosive research and development laboratory wing of the Defence Research and Development Organisation in Pashan near Pune. [Delhi ISI Diplomatic Information Service in English 1442 GMT 2 Aug 79 BK]

NUCLEAR POWER STATION--One more nuclear power station with two units of 235 mw capacity each is to be set up in the country. The location of the power station will be finalized by the end of this year. This was disclosed by the chairman of the Atomic Energy Commission Dr Sethna in Bombay. He said more heavy water plants are planned in the country because they are essential to meet the requirements of the nuclear power program. [Delhi Domestic Service in English 0830 GMT 2 Aug 79 BK]

TARAPUR PLANT GENERATOR LEAKS--New Delhi, July 7--One of the secondary steam generators of the Tarapur nuclear power plant has developed leaks, according to official sources, reports PTI. The sources said that leaks were one of the problems of the Tarapur plant "worth mentioning." Other problems include difficulties in obtaining spare parts and inadequacy in spent fuel storage space. The problems faced by the Tarapur plant are, however, said to be not "unusual" to reactors of this type and vintage." The sources said the Tarapur plant had been operating at 25% to 85% of the rated capacity for more than 18 months. [Text] [Calcutta THE STATESMAN in English 8 Jul 79 p 1]

CSO: 4420

INDONESIAN-FRENCH COOPERATION INCLUDES BUILDING REACTOR, SEEKING URANIUM

Jakarta KOMPAS in Indonesian 9 May 79 p 5

[Article: "Scientific And Technical Cooperation Between Indonesia-France; Uranium Discovered in Kalimantan"]

[Excerpts] A scientific research and technical development cooperation accord was signed in Jakarta between Indonesia and France on 8 May. B.J. Habibe and Pierre Aigrain, State Ministers for Research and Technology represented their countries at the signing of the cooperation accord.

The cooperation which will extend for 5 years, and then can be extended every 2 years, includes industries technology, space technology and research, energy, social and anthropology sciences and natural sciences including oceanology, geography, scientific documentation and information and technology. Specifically France will aid in designing and constructing a science and technology development center (Puspiptek) at Serpong.

Professor Aigrain said the Puspiptek to be built at Serpong is expected to greatly benefit Indonesia. The first laboratory scheduled for construction there will be the construction testing laboratory which is closely related to quality control and industry. Afterwards a calibration, instrumentation and metrology laboratory will be built with an experimental reactor. There will also be a science and technical museum.

Answering questions, Professor Aigrain said that the agreement covers general cooperation. Among the direct aid which will be given immediately by his government will be the construction of the research reactor and a seismology laboratory along with the construction of the general infrastructure needed at the Serpong complex. The reactor to be bilt is now in the discussion stage. It's capacity will be 4 MW and it is expected that it will be able to produce radio isotopes needed by industry and medicine.

Concerning the cooperation by the two countries in looking for uranium, which has been going on for 2 years in Kalimantan, Professor Aigrain said the team had actually found uranium. "The question being faced and dis-

cussed is whether it is economically feasible to mine the uranium as the deposits are in the midst of thick jungle," he said.

In relation to industry, Professor Aigrain said that France will aid in the construction of the French-made "Puma" helicopter which will be assembled by Nurtanio Ltd in Bandung. He also expressed his appreciation of the abilities of Indonesian technicians now working in the aircraft industry.

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CSO: 4213

ENVOY STRESSES 'PEACEFUL' NUCLEAR PROGRAM

Paris L'AURORE in French 2 Aug 79 p 5 LD

[Interview with Iqbal Akhund, Pakistani ambassador to France by Jacques Richard: "Pakistan in Search of Nuclear Energy"--date and place not specified]

[Text] Question: Can Pakistan not do without nuclear energy?

Answer: Energy consumption in Pakistan is [figure illegible] kilowatt-hours per inhabitant per year as against an average consumption of 1,600 kwh in the rest of the world, not to mention countries like the United States where per-capita consumption is over 10,000 kwh per year. Pakistan's conventional fuel resources are negligible. Energy sources such as hydro-electric power are inadequate and sources such as natural gas are also used as raw materials for the manufacture of fertilizer and other essential products.

If Pakistan wants economic development--and there is a direct correlation between economic development and energy consumption--it must use nuclear energy.

Question: Pakistan already has a nuclear power station; what are the next stages of the program?

Answer: The nuclear reactor now in service is situated in Karachi and produces 137 megawatts. The Vienna agency (International Atomic Energy Agency) has helped to draw up a 20-year plan which provides for the production of 16,000 megawatts of nuclear energy. This plan also envisages autonomy (as wide as possible) for Pakistan with regard to fuel supply sources and nuclear technology in order to reduce its dependence on outside sources to a minimum in this vital sector since these sources are not completely reliable and, as is known, can be sensitive to political considerations.

Question: France abandoned plans to supply Pakistan with a plant for reprocessing nuclear waste. How do you explain this decision? Does Pakistan really need this plant?

Answer: It is not up to me to try to explain French Government decisions. Pakistan considers the contract for the construction of a reprocessing plant to be valid and it was reached after lengthy negotiations and offered the most stringent nonproliferation guarantees possible. We hope that the terms of this contract will be honored.

I would like to discuss the second part of the question in greater detail. Everybody is aware of the rise in oil prices and of the relative shortage of this vital commodity. However, people may be less conscious of the fact that the price of uranium has risen even more sharply in recent years and that uranium reserves are also gradually being exhausted.

However, it is possible to prolong the life of uranium reserves by reprocessing the irradiated fuel from [line illegible] plutonium--an artificially produced element--which can be used as nuclear fuel. The prospects for the next 5-10 years are even more promising.

In fact a breeder reactor fed with a given quantity of plutonium produces an even greater quantity of plutonium. It has been estimated that by this process a given quantity of uranium can yield up to 80 times its initial energy value. French technology leads the world in this field, and as you know, the super-Phenix, the first commercially viable breeder reactor, will be operational in France in the near future. It is highly probable that energy savings in coming decades will be based on plutonium.

Question: It is widely thought that Pakistan is on the point of manufacturing a nuclear weapon and will carry out the first tests next fall. Is this true?

Answer: The president of Pakistan has repeatedly stated that Pakistan's nuclear program is entirely peaceful and he reiterated this position a few days ago, as your newspaper reported. Pakistan has always upheld the principle of international safeguards and stresses that there should be no discrimination in applying this principle.

Question: It has been rumored that a possible Pakistani nuclear weapon would become the "Islamic bomb" and could be used by Libya against Israel. Would Pakistan be prepared to "cooperate" with Libya in this way?

Answer: I have already answered your question on the peaceful aims of the Pakistani nuclear program. The mere use of a term such as "Islamic bomb" is enough to show that the problem is approached in a biased and irrational way. Pakistan advocates and has always advocated a peaceful all-embracing settlement in the Middle East.

It regards the Camp David agreements in the context of the need to find a solution to the problems at the root of the Israeli-Arab conflict and to satisfy the urgent need to establish a lasting peace.

We think it is unjust that the Palestinian people should be refused a homeland and a state which belong to them by right. Pakistan does not believe that a lasting peace can be established in the Middle East--unless the Arab territories occupied after the 1967 war are restored to their rightful owners.

If these conditions are fulfilled, Pakistan believes that all states in this region will be able to coexist in peace as envisaged in Security Council Resolution 242. This, I think, corresponds to the French position and to that of the Common Market countries and the vast majority of countries in the world.

Of course, Pakistan is linked with the Arab world by common ties of fraternity, religion, culture and history. Pakistan has important economic relations with the Middel East countries and these relations are being extended. It is completely illogical to think that Pakistan might want to spark off a war in the Middle East.

Question: From which country does Pakistan hope to obtain economic aid to replace the U.S. aid which has been suspended? The line which Pakistan adopts will correspond to significant political choices. Has Pakistan definitively chosen its path?

Answer: The United States decided to suspend a large part of its economic aid and loans to Pakistan, refusing to take account of Pakistan's repeated assurances of its peaceful intentions and without taking into consideration the facts which I have just explained.

This initiative is particularly deplorable if you consider the U.S. stance on certain cases where there is proof or strong suspicion of nuclear proliferation. Moreover, this is not the first time that the United States has suspended its economic aid to Pakistan.

It did so 15 years ago because the Americans did not like the moves to strengthen friendly relations between Pakistan and the PRC. As a sovereign, independent nation conscious of its dignity, Pakistan cannot give way to this kind of pressure or abandon a program which is vital to its economic development.

However, Pakistan really wants to cooperate with the United States, France and all other countries to prevent the threat of nuclear proliferation and it has made a number of specific proposals in this connection, including the creation of a militarily denuclearized zone in South Asia.

CSO: 5100

BHUTTO'S DAUGHTER PREDICTS ATOM BOMB TEST IN OCTOBER

Hong Kong AFP in English 1442 GMT 11 Aug 79 BK

[Text] New Delhi, 11 Aug (AFP)--Pakistan will conduct a nuclear explosion, and maybe in October next, Miss Benazir Bhutto, daughter of former Pakistan Premier Zulfiqar Ali Bhutto, has claimed in a press interview.

She told a Calcutta weekly SUNDAY and quoted by Press Trust of India (PTI) News Agency that her late father's "greatest gift" to Pakistan was that of acquiring a nuclear device for his country.

In the interview published in the weekly's latest issue, Miss Bhutto recalled her father as having said that "my greatest gift to the federation (Pakistan) would materialise after my assassination."

Miss Bhutto made the observation while referring to President Gen. Ziaul Haq's plan to consolidate his position in the coming days. She believed that he would resign as chief of the army staff and remain only as president and appoint his brother-in-law as chief of army staff.

"Then I think he would like to explode the nuclear device in October, and then try to take the credit for it," she said.

General Zia's first action in this direction would be, Miss Bhutto felt, that he would hold local bodies election and make them pass a constitutional amendment giving powers to the president and making Pakistan, now a federation, into a unitary state.

Pakistani Ambassador Abdul Sattar in New Delhi in the meantime denied in a statement that his country was on the threshold of conducting a nuclear blast. He was referring to an observation made by visiting U.S. Senator Charles Percy in Calcutta on Friday that the process had started in Pakistan to go ahead with the manufacture of an atomic bomb. He reiterated that the Pakistani atomic efforts were meant "solely for peaceful purposes."

CSO: 5100

BRIEFS

PAKISTAN NUCLEAR POLICY DISCUSSED--Srinagar, July 5--The External Affairs Minister, Mr Atal Behari Vajpayee told a Press conference here today that Pakistan's plans to manufacture nuclear weapons would not stand in the way of India's efforts to normalize relations with that country. He said the Pakistani President, General Zia-ul-Haq, had assured Mr Morarji Desai that Pakistan wanted to settle outstanding "issues" through negotiations and not confrontation. UNI adds: Mr Vajpayee said Pakistan had made significant headway in the nuclear field and had acquired the necessary technology to manufacture nuclear weapons. However, President Zia had assured Mr Desai that Pakistan would use nuclear energy only for peaceful purposes. He said India was avoiding doing anything that might be construed as an interference in the internal affairs of Pakistan. "Our relations with Pakistan have improved much in various fields," he said. Mr Vajpayee denied there had of late been a "tilt" in India's foreign policy. "We have more balanced relations with all, especially with our neighbouring countries like Sri Lanka, Nepal and Pakistan," he said. [Text] [Calcutta THE STATESMAN in English 6 Jul 79 p 1]

CSO: 5100

THREE DIFFERENT REACTOR TYPES ADOPTED FOR ROK NUCLEAR POWER PROJECTS

Seoul SEOUL KYONGJE SINMUN in Korean 31 Jul 79 p 1

[Seoul U.S. Embassy Translation]

[Text] The government has reportedly decided to adopt three different types of nuclear reactors for nuclear power plants to be constructed by the year 2000. The three different types--light water, heavy water, and fast breeder reactors--will be adopted, with a view to securing a stable supply of nuclear fuel and reducing the nation's fuel dependency on overseas supply to the minimum.

The authorities concerned said 30 July that this decision has been made because there are too many demerits in terms of nuclear fuel requirements and economic in the event of having only light water type reactors in the future nuclear plants.

A fast breeder reactor, however, can not possibly be put into practical use before the early 1990's. In the case of Korea, light water type and heavy water type reactors will be constructed at a ratio of 2 to 1 until 1995, assuming that fast breeder reactors can be made available for use by that year.

Construction cost on a heavy water type reactor is about 20 percent higher than that on a light water type. But it is possible to use natural uranium in heavy water type reactors. Accordingly, heavy water type reactors have advantages in that nuclear fuel can be secured relatively easily and at lower cost, in addition to their superbly high operating rate, they said.

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POLITICAL SPECTS SURROUNDING ATUCHA II ASSESSED

Buenos Aires CONVICCION in Spanish 5 Jul 79 p 11

[Commentary: "Political Aspects of Atucha II's Outfitting"]

[Text] The National Atomic Energy Commission (NEA) still has not officially made an evaluation of the offers to build the Atucha II power plant and a heavy water plant. Nevertheless, there already seems to be a certain consensus as to the convenience of the German proposal in terms of politics and of the guaranties regarding the fulfillment of the contract, in the same way that the CANDU reactor--offered by Canada--is still considered the best from the technological standpoint.

That is to say, in plain words, that we remain as when we came from Spain. At the time of the opening of the sealed bids, the Argentine Nuclear Technology Association (AATN) had already reiterated that the CANDU was the best natural uranium and heavy water reactor that could be purchased in the marketplace, but that the demands of the seller (the Canadian Government) required that very close attention be paid to the political aspects, which (as it was already known in March, the time of the AATN report) could favor Siemens-KWU without the need to acknowledge (as it was done in that report) that "the concept" of KWU's pressure vessels had undergone new and more effective developments.

KWU has increased its interest in this sale since its dealings in Brazil (the nuclear program of Ernesto Geisel) have come under the scrutiny of critics who consider that, in the final analysis, their country does not have the $30 billion to pay for them.

The program approved in Argentina would cost less that $5 billion, which would not place it in doubt as to the possibilities of payment.

Experts consider that the advantages and disadvantages of the Canadian and the German offers are very evenly matched in their technical aspects, and for this reason the political considerations will weigh heavily in the final decision.

The political factor in this instance should be understood to be that which relates to the safeguards, guaranties, inspections, paperwork, signatures, commitments and other stipulations which the governments of the two supplying countries (Germany and Canada in the case of Atucha II) demand of the buyer in order to ensure that the material acquired will not be destined for or diverted to uses other than those explicitly agreed upon in the contract--that is to say, generate electric power and produce fuel for power reactors used for such a purpose

In short, they are the safeguards against the proliferation of nuclear weapons and other explosive devices. It seems that the political decision that the Argentine Government must adopt in relation to these contracts is closely linked to the possibility and the right (not surrendered to date) to eventually develop what is known in the trade as explosive devices for peaceful uses.

But given the reiterated, coherent and uniform stand of the successive Argentine governments in this nuclear field, as well as in that of armaments in general, it can be discounted that there is not the slightest intention to manufacture a nuclear device that would be explosive, not even for peaceful purposes.

The disadvantages of opting for such developments are greater than their advantages, because in exchange for a dubious prestige in the art of atomic explosives, there would be an immediate close down and cancellation of whatever nuclear program was underway, no matter how innocuous and innocent, in addition to the imbalance that would be created in the Southern Cone, especially at a time when relations with some neighboring countries--read Chile and Brazil--still have not been consolidated in terms such as would be able to dispel any kind of distrust.

These are, in broad terms, the political aspects which will be decisive in opting for the offer of Canada or of Germany, inasmuch as their good and bad points seem to be fairly even from the technical standpoint.

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FRANCE SAID PRESSURED BY USA TO DESTROY IRAQI REACTOR

Beirut AL-SAFIR in Arabic 10 Jun 79 pp 1, 16

[Article: "Western Information Agency Sources in Cairo: France Destroyed Iraqi Nuclear Reactor Under Pressure From America, Which Supplies it With Uranium"]

[Text] Sources in Western information agencies in Cairo disclosed that it was the French themselves, under pressure from the United States, who were behind the 6 April destruction of a nuclear reactor, built by the French government, just before the reactor was shipped to Iraq.

This was disclosed in a letter sent by Paul Martin, a correspondent of the OBSERVER FOREIGN NEWS SERVICE in Cairo. The sources said that although the involvement of Israeli information agencies in the early stages of this operation has not been ruled out, the intentional destruction bears the stamp of French atomic experts.

The sources noted that the explosion which destroyed the core of the reactor just 3 days before it was shipped to Iraq set the Iraqi nuclear program back 2 more years, and this delay will permit the French government to supply the reactor later on with new nuclear fuel of a lower grade than that of the high efficiency fuel which France was supposed to ship to Baghdad with the reactor had the explosion not occurred.

The correspondent stated that this operation can be better understood in the light of the foreign and domestic pressures to suspend shipment of this reactor to Iraq to which the French authorities had been subjected.

In November 1975, France had secretly pledged to supply Iraq with 6 containers (approximately 70 kilograms) of enriched uranium prior to the startup of the reactor at the beginning of 1980. This is enough uranium to produce five or six nuclear bombs which would require only modest nuclear expertise to make.

The correspondent added: "The problem of supplying the reactor with fuel was completely eliminated from the open provisions of the nuclear agreement in accordance with which France built Iraq an advanced reactor with a 70-megawatt capacity and contracted to train a team of Iraq scientists to operate it."

The reactor, which was given the name "Ozirak," would have been the first deal involving the latest French nuclear technology abroad, and was matched in efficiency and advancement only by the reactor called "Oziris" which Parisian authorities constructed in southern France.

Western information agencies played a substantial role in spreading "alarm" in European government circles over the possibility that the Iraqi government might use this reactor to produce a nuclear bomb, thus changing the balance of power in a sensitive region such as the oil-rich Gulf area.

In their campaign against the possibility of Iraq owning a nuclear bomb, these agencies employed allegations such as that the Iraqis have intentions to take over the reins of leadership of the Arab region from the Saudis, who took up these reins after they were dropped by Egypt, which signed the peace accords with Israel.

High American sources explained that from the beginning Washington had attempted to persuade France not to go on with this deal, but the French refused to agree to this. However, one high-ranking American source recently stated that the French reconsidered their position and have now become convinced that "what was not possible in the past is now possible." By this remark they were referring to the possibility that Iraq could develop a nuclear arms industry.

Another high-ranking American official explained: "After the warning given by the Carter Administration, we convinced the French that the dangers in this area were real--and it was easy to verify them--and that the interests of the French lay in not aiding the spread of nuclear weapons abroad."

He added: "President Carter's pressure on President Valery Giscard d'Estaing was successful. This left the door wide open for the resignation of Jacques (Chiraque), who basically concluded the deal, from the Cabinet."

The big effect of American pressure on the French was in delaying this deal, and the effect is still being felt. The Americans supply France with most of the enriched uranium it uses in its nuclear reactors at home. This permits the French government to export all it can of the uranium it processes and enriches on its own.

In the past, the United States punished the European Common Market states by halting shipments of uranium to them until France submitted to the control measures which American law prescribes for uranium exportation.

According to statements by high-ranking sources, France agreed 6 months ago to delay shipment of the nuclear reactor to Iraq, while it finishes preparing the less efficient fuel called "(Caramil)."

The correspondent adds that although Western information agencies did not rule out in the beginning that the Israelis had carried out the operation, they say that there is strong evidence that the French themselves were the ones who did it.

These sources point out that the saboteurs entered the warehouse by the main entrance and were able to single out the crate containing the Iraqi reactor from a large number of similar crates in the darkness and place in it a timed charge with eight detonators, a device used only by the French Army.

These sources say that in this case the Israelis would have needed precise details concerning the contents and operation of the warehouse, such as the serial numbers of the crates, the movements of the workers and the warning system, as well as a key to the main entrance.

Information agency sources indicated that the Iraqis imposed the condition on French authorities that they not employ any worker who was Jewish or of Jewish origin in building the reactor. The sources said that with all this caution, the Israelis would not have waited until the third night before shipment of the reactor. Furthermore the French authorities would have been able to step up the guard on the reactor or take the initiative to move it somewhere else.

The sources also stated that the French government's accusation charging a group of environmental protection activists with the operation might have been more believable had the operation not been carried out with such precision.

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SOUTH AFRICAN URANIUM ESTABLISHED IN WORLD MARKET

Canberra THE WEEKEND AUSTRALIAN in English 23-24 Jun 79 p 12

[From Bryan Frith on tour in South Africa]

[Excerpt]

THE ARGUMENT in Australia whether or not to mine uranium had given South Africa a 'honeymoon' period to establish itself in the world market, according to a leading executive of the mining giant, Anglo American Corp.

The executive director of Anglo's gold and uranium division, Mr Dennis Etheridge said that South Africa now produced uranium yearly with a value of 550 million rand ($A563 million) and was now sold well into the future on long-term contracts.

South Africa had been able to take advantage of the delay in Australia to sell its uranium and establish standards of reliability in dispatching uranium and in paying debts.

It was important to get a position in the market where customers belived in the supplier, and that there would be no disruption from government, trade unions or other interests.

Australia was not yet in a position where the rest of the world regarded it as a a stable uranium force. The hiatus in Australia was important to South Africa as all of the country's uranium, excluding namibia, is produced in association with gold.

The Vaal's reef gold produces 1900 tonnes of uranium as a co-product each year, which makes it the world's largest single uranium producer.

South africa will not disclose the grade of the uranium mined, but it is well below that of Australia's uranium deposits.

In some cases the goldmines would close if not for the uranium produced.

Mr Etheridge said there had been a considerable expansion in uranium production since 1976 because of rising prices.

In 1977 South Africa produced 3974 tonnes of uranium oxide, excluding Namibia, and should produce more than 6000 tonnes this year and 8500 tonnes in 1980.

There was sufficient known uranium associated with the gold mines to maintain production for 20-30 years, and there was considerable prospecting underway.

Between 15 and 20 companies, including several big American oil companies, were serching in the Karoo Series, in the vast hinterland of South Africa.

This area is known to be uraniferous but results to date have only indicated small deposits, which it may be possible to treat through a central plant.

Mr Etheridge said South Africa produced between 17 and 20 per cent of the world requirements of uranium and he thought it would remain a primary area, even allowing for the entry of Australia and additional supplies from Canada.

The uranium market was on a bit of a plateau at present . . . It might go into an over-supply position for a few years but in the mid 1980s and 90s was expected to be strong.

The market was already discounting prices for the entry of Australia uranium. Because of the delay in development Australian producers might miss the plateau and come on stream as demand was picking up.

CSO: 5100

BRIEFS

URANIUM CONCENTRATES SALES SUCCESS--London--The South African Government's "free trade" policy on uranium is enabling concentrates from the Republic to command premiums of between 5 dollars (R4,20) and 8 dollars (R6,70) a pound--11 dollars (R9,30) and 17,60 dollars (R14,90) a kilogram--on the world spot market. This is claimed in a report in the latest issue of the Metal Bulletin published in London. The report says: "Sales of South African uranium concentrates are still fetching a premium in the spot market as a result of less stringent end-use and waste control conditions imposed by the South African Government. "The premium is also slightly surprising in view of the recent drop in prices following a series of nuclear power station scares (mainly Harrisburg in the United States)." It claims South African authorities apply a more relaxed policy than other producers such as Canada. And, it adds: "Potential difficulties with Australian (trade) unions are also encouraging buyers to approach South Africa." The report says the current estimates of South African production of 5 750 tons will climb to 13 000 tons a year in the next three to four years. [Text] [Johannesburg THE STAR in English 16 Jul 79 p 15]

CSO: 5100

BENELUX COUNTRIES OPPOSE NUCLEAR POWER PLANTS

Luxembourg Project Abandoned

Rotterdam NRC HANDELSBLAD in Dutch 28 Jun 79 p 17

/Text/ Luxembourg has given up the idea of building a nuclear power plant. It had been planning to build one similar to the type that was used in Harrisburg. A dangerous situation arose there in March because something went wrong in the cooling system. Luxembourg has now given its biggest steel plant, Arbed S.A., instructions to study construction of an electric power plant that would run on coal. The nuclear plant was to have been built by a West German firm. The new coal power plant will cost $400 million. Its capacity, 600-700 kw, will be capable of satisfying the country's needs in 1985. The international Atomic Agency in Vienna is now studying a plan to set up a list of nuclear power plant experts. These experts would be immediately called up whenever anything went amiss with a nuclear power plant.

Belgians Oppose Plant Reopening

Rotterdam NRC HANDELSBLAD in Dutch 13 Jul 79 p 8

/Text/ Antwerp, 13 July (ANP)--Belgian environmental organizations are fiercely opposed to the planned reopening of a processing plant for radioactive fissionable material that was close in 1974. In the course of years this plant built up a pile of 2,000 cubic meters of high-grade radioactive waste in Mol, Belgium, less than 30 kilometers from Eindhoven. Thirteen European countries participated in this experimental plant belonging to the firm Eurochemic, in order to gain knowledge in the field of nuclear physics. In 1971, however, France and the FRG decided to withdraw from the project and to take the industrial processing of fissionable materials in hand themselves.

According to the environmental organizations that make up VAKS (the United Action Groups for a Nuclear Ban), the Belgian Government is now planning to reopen the plant, which was bought in 1977.

For this purpose the capacity of 60 tons a year would have to be raised to 300 tons. The plant would then satisfy the entire Belgian nuclear fuel processing requirements. The environmental groups doubt, however, whether the plant can be put into service again. The installation has a lifetime of 10 years, 8 of which have gone by.

Furthermore, the installation is no good, or so VAKS says. According to available information, over a rather long period when the plant was in operation the water level in the cooling-water reservoir dropped 2 centimeters a day. Where that water went is unknown. Eurochemic never reported breakdowns.

Recently, however, in the area of the border between Belgium and the Netherlands anxiety arose concerning the plans in Mol. The district of Kempenland adopted a resolution opposing atomic activities in Mol until there are watertight guarantees. In the municipal council of Veldhoven, too, questions have been raised about the activities in Mol. According to VAKS, however, the Brabant municipalities have practically no opportunities to exert any real influence.

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